



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-0218; Directorate Identifier 92-ANE-56-AD]

RIN 2120-AA64

Airworthiness Directives; Lycoming Engines, Fuel Injected Reciprocating Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2011-26-04 that applies to certain Lycoming Engines fuel injected reciprocating engines. AD 2011-26-04 requires inspection, replacement if necessary, and proper clamping of externally mounted fuel injector fuel lines. Since we issued AD 2011-26-04, we received revised service information which adds engine models to the applicability. This proposed AD would expand the scope of affected engine models, require inspection, replacement if necessary, and proper clamping of externally mounted fuel injector fuel lines. We are proposing this AD to prevent failure of the fuel injector fuel lines, which could lead to uncontrolled engine fire, engine damage, and damage to the airplane.

DATES: We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone 800-258-3279; fax: 570-327-7101; Internet:

www.lycoming.com/Lycoming/SUPPORT/TechnicalPublications/ServiceBulletins.aspx.

You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call (781) 238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7337; fax: 516-794-5531; email: norman.perenson@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2007-0218; Directorate Identifier 92-ANE-56” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On December 5, 2011, we issued AD 2011-26-04, Amendment 39-16894 (76 FR 79051, December 21, 2011), (“AD 2011-26-04”), for certain Lycoming Engines fuel injected reciprocating engines with externally mounted fuel injector fuel lines installed. AD 2011-26-04 requires inspection, replacement if necessary, and proper clamping of externally mounted fuel injector fuel lines. AD 2011-26-04 also states that the AD does not affect engines that have a Maintenance and Overhaul Manual with an Airworthiness Limitations Section that requires inspection and replacement, if necessary, of externally mounted fuel injector fuel lines. AD 2011-26-04 resulted from Lycoming Engines revising a mandatory service bulletin (MSB) to add engine models requiring inspections. We issued AD 2011-26-04 to prevent failure of the fuel injector fuel lines, which could lead to uncontrolled engine fire, engine damage, and damage to the airplane.

Actions Since AD 2011-26-04 Was Issued

Since we issued AD 2011-26-04, Lycoming Engines issued MSB No. 342G, dated July 16, 2013, and MSB No. 342G, Supplement 1, dated August 29, 2013 to identify previously omitted engine models.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would add three engine models to the applicability list of affected engines in AD 2011-26-04. All other requirements of AD-2011-26-04 are retained in this proposed AD.

Costs of Compliance

We estimate that this proposed AD would affect about 17,740 engines installed on airplanes of U.S. registry. We also estimate that it will take about 4.5 hours per engine to inspect externally mounted fuel injector fuel lines. The average labor rate is \$85 per hour. Prorated parts life will cost about \$2,178 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$11,160,935.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This proposed regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2011-26-04, Amendment 39-16894 (76 FR 79051, December 21, 2011), and adding the following new AD:

Lycoming Engines (formerly Textron Lycoming Division, AVCO Corporation):

Docket No. FAA-2007-0218; Directorate Identifier 92-ANE-56-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

(b) Affected ADs

This AD supersedes AD 2011-26-04, Amendment 39-16894 (76 FR 79051, December 21, 2011).

(c) Applicability

This AD applies to Lycoming Engines fuel injected reciprocating engine models identified in Table 1 to paragraph (c) of this AD, with externally mounted fuel injector fuel lines (stainless steel tube assembly), installed.

Table 1 to Paragraph (c) - Engine Models Affected

Engine	Model
AEIO-320	-D1B, -D2B, -E1B, -E2B
AIO-320	-A1B, -B1B, -C1B
IO-320	-B1A, -B1C, -C1A, -D1A, -D1B, -E1A, -E1B, -E2A, -E2B
LIO-320	-B1A, -C1A
AEIO-360	-A1A, -A1B, -A1B6, -A1D, -A1E, -A1E6, -B1F, -B2F, -B1G6, -B1H, -B4A, -H1A, -H1B
AIO-360	-A1A, -A1B, -B1B
HIO-360	-A1A, -A1B, -B1A, -C1A, -C1B, -D1A, -E1AD, -E1BD, -F1AD, -G1A

Engine	Model
IO-360	-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A2A, -A2B, -A3B6, -A3B6D, -B1B, -B1D, -B1E, -B1F, -B1G6, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1F, -C1G6, -F1A, -J1A6D, -M1B, -L2A, -M1A
IVO-360	-A1A
LIO-360	-C1E6
TIO-360	-A1B, -C1A6D
IGO-480	-A1B6
AEIO-540	-D4A5, -D4B5, -D4D5, -L1B5, -L1B5D, -L1D5
IGO-540	-B1A, -B1C
IO-540	-A1A5, -AA1A5, -AA1B5, -AB1A5, -AC1A5, -AE1A5, -B1A5, -B1C5, -C1B5, -C1C5, -C4B5, -C4D5D, -D4A5, -D4B5, -E1A5, -E1B5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -V4A5D, -K1A5, -K1A5D, -K1B5, -K1C5, -K1D5, -K1E5, -K1E5D, -K1F5, K1H5, -K1J5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5D, -K1K5, -K1E5, -K1E5D, -K1F5, -K1J5, -L1C5, -M1A5, -M1B5D, -M1C5, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -V4A5, -V4A5D, -W1A5, -W1A5D, -W3A5D
IVO-540	-A1A
LTIO-540	-F2BD, -J2B, -J2BD, -N2BD, -R2AD, -U2A, -V2AD, -W2A
TIO-540	-A1A, -A1B, -A2A, -A2B, -A2C, -AE2A, -AH1A, -AA1AD, -AF1A, -AF1B, -AG1A, -AB1AD, -AB1BD, -AH1A, -AJ1A, -AK1A, -C1A, -E1A, -G1A, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, -U2A, -V2AD, -W2A
TIVO-540	-A2A
IO-720	-A1A, -A1B, -D1B, -D1BD, -D1C, -D1CD, -B1B, -B1BD, -C1B

(d) Unsafe Condition

This AD was prompted by Lycoming Engines issuing Mandatory Service Bulletin (MSB) No. 342G, dated July 16, 2013 and MSB No. 342G, Supplement 1, dated August 29, 2013 which add engine models requiring inspection. We are issuing this AD to prevent failure of the fuel injector fuel lines, which could lead to uncontrolled engine fire, engine damage, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Initial Inspections

(i) Within 10 hours time-in-service (TIS) after the effective date of this AD, inspect the fuel injector fuel lines and clamps between the fuel manifold and the fuel injector nozzles. Use Lycoming Engines MSB No. 342G, dated July 16, 2013 and Supplement No. 1 to MSB 342G, dated August 29, 2013, to determine what must be inspected. Replace any fuel injector fuel line or clamp that fails the inspection required by the Fuel Line Inspection and Installation Checklist in MSB No. 342G.

(ii) Thereafter, re-inspect after any maintenance is done on the engine, where any clamp on a fuel injector fuel line was disconnected, moved, or loosened, and within every 110 hours TIS and after each engine overhaul. Use Lycoming Engines MSB No. 342G, dated July 16, 2013 and Supplement No. 1 to MSB 342G, dated August 29, 2013, to determine what must be inspected and the Fuel Line Inspection and Installation Checklist in MSB No. 342G to perform the re-inspection.

(2) Credit for Previous Actions

(i) If you inspected your fuel injector fuel lines and clamps using Lycoming Engines MSB 342F, dated June 4, 2010, or earlier version, you met the initial inspection requirements of this AD. However, you must still comply with the repetitive inspection requirements of paragraph (e)(1)(ii) of this AD.

(ii) Reserved.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, New York Aircraft Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(g) Related Information

(1) For more information about this AD, contact Norm Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 516-228-7337; fax: 516-794-5531; email: norman.perenson@faa.gov.

(2) Lycoming Engines MSB No. 342G, dated July 16, 2013, and MSB No. 342G, Supplement 1, dated August 29, 2013, pertain to the subject of this AD and can be obtained from Lycoming Engines using the contact information in paragraph (g)(3) of this AD.

(3) For service information identified in this AD, contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701; phone: 800-258-3279; fax: 570-327-7101; Internet: <http://www.lycoming.com/Lycoming/SUPPORT/TechnicalPublications/ServiceBulletins.aspx>.

(4) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on November 8, 2013.

Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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